ABSTRACT OF THE DISCLOSURE

Embodiments of the invention provide a fluid processing method and apparatus. The apparatus includes a substrate support assembly positioned in a processing volume, a disk shaped member positioned in the processing volume in parallel orientation with a substrate supported on the substrate support assembly, a fluid outlet positioned in a central location of the disk shaped member, and a plurality of turbolators positioned on an upper surface of the disk shaped member, the turbolators being configured to generate a uniform turbulent flow of fluid traveling from the fluid outlet to a perimeter of the substrate. The method includes flowing a heated processing fluid over a plurality of turbolators that are positioned under a substrate being processed to control the temperature of the substrate during processing.

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